

CLAIMS

What is claimed is:

1. A method for automatically processing a representation
of a multimedia presentation having multiple
5 information streams contained therein, the method
comprising the steps of:
 - (a) matching observed event cues detected within at
least one information stream of the multimedia
presentation with a model of expected event cues
10 for a class of presentations to which the
specific multimedia presentation belongs, the
model being a finite state automaton having
states corresponding to segments of the
presentation class, and having state transitions
15 corresponding to expected event cues, the model
thereby also specifying an expected time sequence
of state transitions; and
 - (b) determining that the multimedia presentation
belongs to a particular presentation class based
20 upon the results of matching observed event cues
with the model of expected event cues.
2. A method as in Claim 1 wherein the expected event cues
further comprise a class of event cues.
3. A method as in Claim 2 wherein the model further
25 specifies that any given one of a number of event cues
in a class of event cues may cause a transition

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between a given selected state and another selected state in the model.

4. A method as in Claim 1 wherein the expected event cues comprise a plurality of intrastream cues taken from a given information stream.
5. A method as in Claim 1 wherein the expected event cues comprise interstream cues taken from more than one information stream, and the step of selecting presentation segments comprises correlating the interstream event cues.
6. A method as in Claim 1 wherein the expected event cues are taken from a text information stream.
7. A method as in Claim 6 wherein the expected event cues are closed captioned word cues.
8. A method as in Claim 6 wherein the expected event cues are closed captioned punctuation cues.
9. A method as in Claim 6 wherein the expected event cues are token phrases for the class of multimedia presentation.
10. A method as in Claim 9 wherein the token phrases comprise text strings.
11. A method as in Claim 9 wherein the token phrases comprise closed captioned punctuation cues.

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12. A method as in Claim 11 wherein the close captioned punctuation cues are selected from the group consisting of ">>", ">>>", and ":".
13. A method as in Claim 9 wherein the token phrases
5 comprise a named entity and a text string.
14. A method as in Claim 13 wherein the token phrases include "I'm" followed by a <person> named entity.
15. A method as in Claim 9 wherein the token phrases
10 comprise a named entity and a closed captioned punctuation cue.
16. A method as in Claim 15 wherein the token phrases include a <person> named entity followed by a ":".
17. A method as in Claim 9 wherein the token phrases comprise introductory news broadcast terms.
- 15 18. A method as in Claim 17 wherein at least one token phrase is selected from the group consisting of "I'm", "hello", "welcome", "hello from", "welcome to", "thanks for watching", "thanks for joining us", and "here on".
- 20 19. A method as in Claim 9 wherein the token phrases comprise anchor to reporter hand-off phrases.
20. A method as in Claim 19 wherein at least one token phrase comprises a reporter named entity.

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21. A method as in Claim 19 wherein at least one token phrase is selected from the group consisting of a station identification with a reporter named entity, a reporter named entity with the phrase "joins us", and
5 a reporter named entity with the phrase "reports".
22. A method as in Claim 9 wherein the token phrases comprise reporter to anchor hand-off phrases.
23. A method as in Claim 22 wherein at least one token phrase is selected from the group consisting of a
10 station identification with a reporter named entity, a reporter named entity with a located named entity, "back to you", and "thank you".
24. A method as in Claim 9 wherein the token phrases comprise leaders to highlights of upcoming news
15 stories.
25. A method as in Claim 24 wherein at least one token phrase is selected from the group consisting of "coming up", "next on", "ahead on", "when" together with a station identification and "returns", and "also
20 ahead".
26. A method as in Claim 9 wherein the token phrases comprise sign off phrases.
27. A method as in Claim 26 wherein at least one token phrase is selected from the group consisting of "that

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wraps up", "that is all", "that's all", "that's" together with a news program identification, "thanks for watching", and "thanks for joining us".

28. A method as in Claim 6 wherein the expected event cues
5 are named entities.
29. A method as in Claim 28 wherein the named entities are selected from the group consisting of persons, locations, organizations, times, dates and monetary values.
- 10 30. A method as in Claim 1 wherein the model of expected event cues is developed from observed event cues occurring in a class of media presentations.
31. A method as in Claim 28 wherein the model of expected event cues is developed by statistical analysis of
15 observed event cues.
32. A method as in Claim 1 wherein the expected event cues are taken from an image information stream.
33. A method as in Claim 32 wherein the expected event cues are selected from the group consisting of black
20 frame, logo frame, single anchor frame, double anchor frame, and reporter frame.
34. A method as in Claim 1 wherein the expected event cues are taken from an audio information stream.

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35. A method as in Claim 34 wherein the expected event cues are selected from the group consisting of silence detection, speaker change detection, and jingle detection.
- 5 36. A method as in Claim 1 wherein the expected event cues are indications of news stories.
37. A method as in Claim 34 wherein the expected event cues are selected from the group consisting of before start of broadcast, start of broadcast, highlight
10 segment, advertising, story start, story end, before end of broadcast, and end of broadcast.
38. A method as in claim 1 wherein the expected event cues comprise a reporter to anchor (R to A) transition.
39. A method as in claim 38 wherein the expected event
15 cues comprise an anchor to reporter (A to R) transition.
40. A method as in claim 1 wherein the class of event cues comprise a *signon* cue class that includes at least cues comprising "hello and welcome" and "hello from" a
20 location.